

The Occurrence and the Distribution of Specific
Acetyl-Cholinesterase in the Cortian Organ of
Animals in a State of Relative Rest and Under
Conditions of Sonic Stimuli

20-119-1-45/52

acetylcholine which plays a main part in the trans-synaptic transfer of the nervous impulse at present is considered an established fact. The newest histochemical methods (References 16-19) make it possible to determine the localization of the specific acetyl-cholinesterase (AzChE) and consequently to judge on the occurrence of acetylcholine. Thereby the occurrence and the distribution of the enzyme mentioned in the title makes possible the judgement on the dynamics of formation and the transfer of the nervous impulse. In the present paper such a problem is posed with regard to the Cortian organ, its system of synapses between the ciliary cells and the peripheral afferent endings of the neurons of the spinal ganglion and the efferent endings of the vegetative olivo-cochlear-bundle of Rasmussen (Reference 20). Experiments were made with 40 cochleae of 16 young cats and 4 guinea pig. In series I (control series, 6 animals) the Cortian organ of animals

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in relative rest was investigated. In series II the animals (7) were previously exposed to the influence of low frequencies (300 cycles, 95 db). In series III (7 animals) high frequencies (1500 cycles, 95 db) were used. In series II and III the sonic stimuli were also continued after the beheading of the animals until the fixation. In the cochleae of the control animals a sharply outlined regular dark-brown strip along the outside edge of all 3 windings even becomes visible under the magnifying glass. This localization of the enzyme corresponds to the position of the Cortian organ (figure 1), to the level of the inner ciliary cells and the inner spiral-plexus. In other parts of the organ the activity of the enzyme is absent. In series II of the experiments the distribution of AzChE is only changed at the level of the upper and the upper part of the middle winding, where the concentration of the enzyme

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rapidly decreases (figure 3). In series III the distribution of AzChE is on the whole only changed at the level of the lower and the lower part of the middle winding. From the results can be concluded that the specific enzyme AzChE - vice versa acetylcholine - plays the main part in the formation and the passing on of nervous impulses in the domain of the inner-organic cochlear synapses. There are 4 figures and 25 references, 10 of which are Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute for Evolutionary Physiology imeni I. M. Sechenov AS USSR)
PRESENTED: September 26, 1957, by L. A. Orbeli, Academician
SUBMITTED: September 20, 1957

Card 4/4

AUTHORS: Ginetsinskiy, A. G., Zaks, M. G., Sov/20-120-1-60/63
Titova, L. K.

TITLE: The Mechanism of Action of the Antidiuretic Hormone
(Mekhanizm deystviya antidiureticheskogo gormona)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, sr 1,
pp. 216-218 (USSR)

ABSTRACT: In the investigation of the hyaluronidase activity of urine the authors became convinced (reference 1) that the process of facultative water re-absorption is based on the increase of the permeability of the intercellular intermediate strata which cement the epithelium of the small distal canals. The authors suppose that the effect of the antidiuretic hormone (ADH) which stimulates the re-absorption is connected with the secretion of a ferment by the nephritic cells, which depolymerizes the hyaluronic acid. This latter forms a constituent of the intercellular cement. This supposition which assumes the structural change of the kidney muco-polysaccharides could be proved

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directly in a histochemical way. For the test white rats were used. The animals of one group were killed at the climax of the diuresis which was caused by water load, those of the other group after a 48 hour withdrawal of water or after an injection of Pituitrin-P. Quickly excised kidneys were investigated histochemically. Microscopic photographs of the fixed and dyed preparations are shown in the figures 1 - 3. The authors lay down the following facts as proved: 1. ADH stimulates the cells of the collecting duct (sobiratel'nyye trubki) which begins to secrete according to an apocrine type, with the secretion showing the ferment hyaluronidase. 2. The secreting ferment causes very quickly a depolymerizing effect on the hyaluronic complexes which form a constituent of the intercellular cement and of the basement membrane of the small canals. This effect renders those structures permeable to water which separate the lumens of the small canals from the interstitial tissue. The hypotonic contents of the small tubes follows the osmotic gradient, and as a consequence of that is re-absorbed facultatively. 3. The water entering the interstices is removed by an extensive

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network of opening lymphatic capillary vessels. 4. All these processes are localized in the most external distal nephritic section in the collecting ducts which also form the main point of facultative water re-absorption. The naming of this section should be changed as the term "collecting duct" does in no way correspond to the importance of the very active processes taking place in it. There are 3 figures and 6 references, 2 of which are Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute of Evolutionary Physiology imeni I. M. Sechenov, AS USSR)

PRESENTED: January 31, 1958, by L. A. Orbeli, Member, Academy of Sciences, USSR

SUBMITTED: January 29, 1958

Card 3/4

The Mechanism of Action of the Antidiuretic Hormone SOV/20-120-1-60/63

- 1. Hormones--Physiological effects
- 2. Kidneys--Physiology
- 3. Kidneys--Performance
- 4. Rats--Physiology

Card 4/4

17(1)
AUTHORS:

Vinnikov, Ia. A., Titova, L. K.

sov/2o-122-5-48/56

TITLE:

The Presence and Distribution of Succinidehydrase and Cytochromeoxidase in Corti's Organ of Animals at the State of Relative Rest, and Subjected to Sonic Treatment
(Nalichiye i raspredeleniye suksinidegidrazy i tsito-khromoksidazy v kortiyevom organe zhivotnykh, nakhodyashchikhsya v sostoyanii otnositel'nogo pokoya i v usloviyakh zvukovogo vozdeystviya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5,
pp 921 - 924 (USSR)

ABSTRACT:

The occurrence of succinidehydrase (SDH) and cytochrome oxidase (CCHO) in the tissues of animal organisms, and that of the corresponding substrates is not only related to the aerobic oxidation but also to the anaerobic glycolysis. This actually characterizes the energy household of the organ. The SDH dehydrates under aerobic conditions the succinic and fumaric acid as it contains a sulphydryl group in its prosthetic group; the former

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The Presence and Distribution of Succinidehydase and Cytochromoxidase in Corti's Organ of Animals at the State of Relative Rest, and Subjected to Sonic Treatment SOV/2o-122-5-43/56

is a condition for the fact that the system cytochrome -C-cytochromoxidase has a hydrogen acceptor effect with iron in its prosthetic group (Ref 1). As it is usually possible to localize the SDH and CChO in the organs by means of modern methods the distribution of these ferments may be used as classification medium as to what an extent the one or the other structural component participates in the energy processes, and in how far the latter cause the carrying out of the functions of these structures. As the authors proved an endogenic energetic substratum-glycogen - in Corti's organ (Ref 2) the colloidal state of which changed under the influence of sounds of different frequency it was only natural that an experiment of a histochemical investigation of the SDH and CChO was carried out with the same object. The authors give the results of such experiments in Corti's organ and in the ganglion of the 8th nerve. By means of total preparation altogether 120 Corti's

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The Presence and Distribution of Succinidehydase and Cytochromoxidase in Corti's Organ of Animals at the State of Relative Rest, and Subjected to Sonic Treatment SCV/26-122-5-48/56

organs of guinea pigs, rabbits and cats were investigated. The animals were decapitated either at a state of relative rest (control) or after 1 hour high-frequency sonic treatment (1500 c, 95 db), or at low frequencies (300 c, 95 db). The results obtained showed a characteristic distribution of SDH and CChO in the structures of Corti's organ. In the outer "haircells" (narushnyye volosovyye kleti) and in the neurons of the spinal ganglion, especially in the former, also other complex fermentative systems are localized, as well as nucleic acids and glycogen (Refs 8-12). Under the influence of functional stress - sound - the distribution changes and so does the activity of the SDH as well as of the CChO and other chemical reagents investigated by the authors. The activity of the SDH and apparently also of the CChO in the receptor elements and in the neurons of the lower windings of the cochlea decreases. The lower frequencies effect the decrease of the activity of

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The Presence and Distribution of Succinidehydase and Cytochromoxidase in Corti's Organ of Animals at the State of Relative Rest, and Subjected to Sonic Treatment

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The SDH and apparently also of the CChO in the receptor elements and the upper windings of the cochlea. The most important fact is, according to the authors' opinion, the simultaneous localization of a great number of ferment (Refs 8-10) besides glycogen and nucleic acids (Refs 2,12) in the cytoplasm of the outer "haircells". The SDH and CChO are included. As a rule they are characterized by a low activity. Apparently the differences formed during the evolution processes in the distribution of the chemically active substances do not only cause the specific character of the molecular structure and of the energy household of the receptor elements but also the special character of their stimulation. There are 4 figures and 14 references, 10 of which are Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im.I.M.Sechenova Akademii nauk SSSR (Institute of Evolutionary Physiology imeni I.M. Sechenov AS USSR)
Card 4/5

BRONSHTEYN, A.A.; TITOVA, L.K.

Problems of cytochemistry, histochemistry, and cytophysiology
at the Second Conference on Problems of Evolutionary Physiology,
held in memory of Academician L.A.Orbeli at Leningrad, March
17-21, 1959. TSitologiya 1 no.4:473-475 J1-Ag '59.

(MIRA 12:10)

(PHYSIOLOGY)

VINNIKOV, Ya.A.; TITOVA, L.K.

Method of in vivo isolation of the membranous labyrinth (the cochlea and the vestibule); preparation of and description of flat Corti's organ preparations. Arkh. anat. gist. i embr. 36 no.4:82-93 Ap '59
(MIRA 12:?)

1. Laboratoriya evolyutsionnoy morfologii (zav. - prof. Ya. A. Vinnikov)
Instituta evolyutsionnoy fiziologii im. I.M. Sechenova AN SSSR.
Adres avtorov: Leningrad, Ligovskiy prosp., d.164, kv.13.
(LABYRINTH, anat. & histol.
Corti's organ, intravital prep. & description (Rus))

ZAKS, M.G.; TITOVA, L.K.

Histological and histochemical changes in the kidney of rats under conditions of hydration and antidiuresis. Arkh.anat. glist. i embr. 37 no.7:19-28 J1 '59. (MIRA 12:10)

1. Laboratoriya evolyutsii vydelitel'nykh protsessov (zav. - prof.A.G.Ginetsinskiy) i laboratorii evolyutsionnoy morfologii (zav. - prof.Ya.A.Vinnikov) Instituta evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR. Adres avtorov: Leningrad F-121. Prosp.Maklina, d.32. In-t evolyutsionnoy fiziologii im. I.M. Sechenova.

(VASOPRESSIN, pharmacology)
(KIDNEY, physiology)

TITOVA, L. K., VINKOV, YA. A.

"Cytochemical Theory of Hearing."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

Institute of Evolutionary Physiology Imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad.

TITOVA, L. K., BRODSHTEYN, A. A., VNIKIKOV, YA. A., YAKOVLEV, V. A.

"The Localization and Distribution of the 'Total' Protein and its Functional (SH, -SS-, COOH) Groups in Corti's Organ Under Conditions of Relative Rest and in a State of Excitation."

report submitted for the First Conference on the problems of Cyto and Histochemistry, Moscow, 19-21 Dec 1960.

Institute of Evolutionary Physiology Imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad.

VINNIKOV, Yakov Abramovich; TITOVA, Lidiya Konstantinovna; KARAMYAN, A.I.,
prof., ovt. red.; NATANOVA, N.V., red. izd-va; BOCHEVER, V.T.,
tekhn. red.

[Organ of Corti; histophysiology and histochemistry] Kortiev
organ; gistofiziologija i gistokhimija. Moskva, Izd-vo Akad.
nauk SSSR, 1961. 260 p. (MIRA 15:1)
(LABYRINTH (EAR))

TITOVA, L. K., and VINNIKOV, YA. A. (USSR)

"Cytochemical and Biochemical Features of Receptor Cell Excitation
in the Internal Ear."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

YAKOVLEV, V.A.; TITOVA, L.K.; BRONSHTEYN, A.A.; VINNIKOV, Ya.A.

Localization and cytochemical characteristics of proteins of the
hair cells of Corti's organ during a state of relative rest and
during acoustic stimulation. Dokl. AN SSSR 136 no.2:456-459 '61.
(MIRA 14:1)

1. Institut evolyutsionnoy fiziologii imeni I.M. Sechenova Akademii
nauk SSSR. Predstavлено академиком I.I. Shmal'gauzenom.
(PROTEINS IN THE BODY)
(SOUND—PHYSIOLOGICAL EFFECT)
(LABYRINTH (EAR))

VINNIKOV, Ya.A.; TITOVA, L.K. (Leningrad)

Cytophysiological and cytochemical studies on hair cells in the organ of Corti; cytochemical theory of hearing. Usp. soor. biol. 53 no.1:
105-123 '62. (MIRA 15:5)

(LABYRINTH (EAR))

VINNIKOV, Ya.A.; TITOVA, L.K.

Dehydrase activity in the mitochondria of nerve terminations
in the region of the synapses of the inner ear of vertebrates.
Dokl. AN SSSR 142 no.2:484-487 Ja '62. (MIRA 15:2)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova
AN SSSR. Predstavлено академиком Н.Н.Сисакяном.
(DEHYDRASE)
(MITOCHONDRIA)
(NERVES)

ACCESSION NR: A74042663

.../000/63/000/000/0101/0104

AUTHOR: Vinogradov, Ya. A.; Ganeoko, O. G.; Titova, L. E.; Bronshteyn, A. A.; Govardovskiy, V. I.

TITLE: A structural and cytochemical investigation of the organ of gravity (utricle of the vestibular portion of the labyrinth) during rest and under the influence of accelerations

SOURCE: Konferentsiya po aviatcionnoy i kosmicheskoy meditsine, 1963. Aviatcionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 101-104

TOPIC TAGS: utricle, utricle function, acceleration effect, cytochemistry, substructure, pig, monkey, pigeon

ABSTRACT: Although the role of the utricle under normal conditions in maintaining muscle tonus is well known, its functional mechanism in man and animals under the influence of a gravitational field is not clear. Comparative electron microscopic and cytochemical studies were conducted on the utriculi of guinea pigs, monkeys, and pigeons during relative quiescence and brief, repeated accelerations of 10 g. Shifts in the structural and cytochemical organization of ciliary cells

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ACCESSION NR: AT4042663

and synapses of the utriculus during accelerations reflected their stimulation and the transmission of impulses. Accompanying these shifts was a progression of biochemical processes beginning with protein synthesis, leading to tissue respiration and culminating in the activity of acetylcholinesterase. Results of the investigation reveal how the utriculus responds to acceleration on a subcellular level and suggest what its mechanism of regulation would be under space-flight conditions. However, processes of its specific stimulation and their correspondence with receptor regions of the vestibular organ remain unclear.

ASSOCIATION: none

SUBMITTED: 27Sep63

ENCL: 00

SUB CODE: LS

NO REF SGV: 000

OTHER: 000

Card 2/2

TITOVA, L.K.

FID Nr. 972-36 21 May

EFFECTS OF AN ALTERED GRAVITATIONAL FIELD ON THE VESTIBULAR APPARATUS (USSR)

Vinnikov, Ya. A., O. G. Gazenko, L. K. Titova, and A. A. Bronshteyn. IN:
Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya, no. 2, Mar-Apr
1963, 222-231.
S/216/63/000/002/003/004

Morphological and histochemical studies of the receptor cells of the utricle and the neurons of the vestibular ganglia of guinea pigs and cats were made while the animals were in a state of relative rest and after exposure to transverse radial accelerations of 1.5 G for 30 min, 3 G for 10 min, and 10 G for 3 min. Accelerations of 1.5 to 3 G caused an increase in acetylcholine esterase activity in the synapse regions and a slight decrease in the cytoplasmic RNA content of the receptor cells of the utricle. Accelerations of 10 G brought about a sharp drop in the cytoplasmic RNA content of the receptor cells of the

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AID Nr. 972-36 21 May

EFFECTS OF AN ALTERED GRAVITATIONAL FIELD [Cont'd]

8/216/63/000/002/003/004

utricle and of some neurons of the vestibular ganglia, decreased the total protein and protein functional groups, and lowered the activity of oxidative enzymes in the mitochondria and the activity of acetylcholine esterase in the synapse regions. Acceleration-induced changes in RNA distribution were generally more pronounced in guinea pigs than in cats. Restoration of the amount and activity of these biochemical substances began several hours after exposure to 10 G and was complete 12 to 14 days later.

[AB]

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VINNIKOV, Ya.A.; GAZENKO, O.G.; TITOVA, L.K.; OSIPOVA, I.V.; BRONSHTEYN, A.A.

Histochemical and ultrastructural changes in the receptor cells
of the utricle in a changed gravitational field. Dokl. AN SSSR
153 no.2:450-453 N '63. (MIRA 16:12)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR.
Predstavлено академиком Н.М.Сисакяном.

X

VIMNIKOV, Ya. A.; TITOVA, L. K.; OSIPOVA, I. V.; BRONSHTEYN, A. A.

"Cytochemical and electron microscopical investigation of nucleolar RNA extruding into cytoplasm."

report submitted for 2nd Intl Cong, Histochemistry & Cytochemistry, Frankfurt,
16-21 Aug 64.

Leningrad.
Sechenov Inst of Evolutionary Physiology, AS USSR.

KREPS, Ye.M., otv. red.; VERZHBINSKAYA, N.A., red.; VOSKRESENSKAYA, A.K., red.; ZHUKOV, Ye.K., red.; ZAGORUL'KO, T.M., red.; ITINA, N.A., red.; KARAMYAN, A.I., red.; KARMANOVA, I.G., red.; KONSTANTINOVA, M.S., red.; TITOVA, L.K., red.

[Evolution of the functions; physiological, biochemical and structural foundations of the evolution of the functions. Festschrift for the 80th anniversary of Academician L.A.Orbeli] Evoliutsiia funktsii; fiziologicheskie, biokhimicheskie i strukturnye osnovy evoliutsii funktsii. Sbornik posviashchennyi 80-letiiu akademika L.A.Orbeli. Moskva, Izd-vo "Nauka," 1964. 290 p. (MIRA 17:6)

1. Akademiya nauk SSSR. Institut evolyutsionnoy fiziologii.
2. Chlen-korrespondent AN SSSR (for Kreps).

TITOVA, L.K.; ARONOVA, M.Z.

Cholinesterase in the organs of the lateral line of bony fishes.
Dokl. AN SSSR 155 no. 4:974-977 Ap '64. (MIRA 17:5)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR.
Predstavleno akademikom I.I.Shmal'gauzenom.

L 21579-66 FWT(1) SCTB DD
ACC NR: AP6009429

SOURCE CODE: UR/0020/66/166/006/1447/1450

AUTHOR: Vinnikov, Ya. A.; Gazenko, O. G.; Titova, L. K.; Bronshteyn, A. A.;
Pevzner, R. A.; Aronova, M. Z.; Vasil'yev, P. V.

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B

ORG: Laboratory of Evolutionary Morphology, Institute of Evolutionary Physiology and
Biochemistry im. I. M. Sechenova, Academy of Sciences SSSR (Laboratoriya evolyutsionnoy
morfologii Instituta evolyutsionnoy fiziologii i biokhimii Akademii nauk SSSR)

TITLE: Electron microscopy of mitochondria in the area of utricular synapses in the
inner ear of vertebrates

SOURCE: AN SSSR. Doklady, v. 166, no. 6, 1966, 1447-1450

TOPIC TAGS: inner ear, animal physiology, neurophysiology, utricle, receptor cell,
synapse, centripetal acceleration, acceleration effect

ABSTRACT: Comparison of utricular receptors in resting and centrifuged animals dis-
closed some interesting features of the spatial relationship between the mitochondria
of hair cells and their synapses. A variety of animals -- white mice, land tor-
toises, common frogs, pigeons, chickens, and pickerel -- were subjected to single
and repeated centripetal accelerations of 10-18 G for 5-10 min. The inner ear of
each animal was removed before decapitation. Electron microscopy of the utricles of
experimental animals showed that the mitochondria of utricular hair cells can be in
close contact with the presynaptic membrane, especially in animals subjected to

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UDC: 576.347

L 21579-66

ACC NR: AP6009429

accelerations. This grouping of the presynaptic mitochondria at the membrane was especially evident in the utricular hair cells of white mice rotated for 3 min at 18 G. Grouping of presynaptic mitochondria was also observed in efferent bud-shaped nerve endings in the utricles of frogs and tortoises centrifuged three times at 10 G. A similar phenomenon was noted in utricular cells of pickerel after 10 min of centrifugation at 10 G. It is postulated from the experimental data, including electron micrographs, that the mitochondrial apparatus of utricular receptor cells in vertebrates participates in the work of utricular synaptic structures. The authors' previous observations of the change in dehydrogenase activity of the synapsis. Various possible mechanisms of mitochondrial participation in the activity of synapses are presented. The results of this study are of special significance in increasing the understanding of the nature of utricular receptor excitation and the neural transmission of excitation under altered gravity conditions. An interpretation of these phenomena will be the subject of future studies.

[JS]

SUB CODE: 06/ SUBM DATE: 28Jul65/ ORIG REF: 008/ OTH REF: 010/ ATD PRESS:

4219

Card 2/2 UVR

L 29234-66 -

ACC NR: AF6019367

SOURCE CODE: UR/0385/65/001/004/0311/0319

17
B

AUTHOR: Titova, L. K.

ORG: Laboratory of Evolutionary Morphology, Institute of Evolutionary Physiology and Biochemistry im. I. M. Sechenov, AN SSSR, Leningrad (Laboratoriya evolyutsionnoy morfologii Instituta evolyutsionnoy fiziologii i biokhimii AN SSSR)

TITLE: Histochemical and electronmicroscopic investigations of the development of receptor structures of the membranous labyrinth (inner ear) of vertebrates

SOURCE: Zhurnal evolyutsionnoy biokhimii i fiziologii, v. 1, no. 4, 1965, 311-319

TOPIC TAGS: nucleic acid, protein, enzyme, histology, biochemistry

ABSTRACT: Investigations were conducted to determine the origin, localization, and redistribution of certain chemical and biologically active substances in the course of the development of receptor structures in the membranous labyrinth of some of the vertebrates during the embryonic and postnatal stages of growth. In addition to the histochemical and electronmicroscopic studies, cytochemical investigations of the receptor content of nucleic acids, the so-called total protein, functional protein molecules, glycogen, alkaline and acid phosphomonoesterase, and others were conducted. The vertebrates under investigation were fish, including several varieties of sturgeon; amphibia — *Bufo viridis* and *Rana temporaria*; reptiles; domestic fowl; mammals including sheep, goats, rabbits, and cats. Earlier in-

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UDC: 591.484.4/9:576.311/314.05:597.4/6:598.13:
598.617:599.32:599.6/7+612.886.0.19

L 29234-66

ACC NR: AP6019367

vestigations already established that the receptor elements of the inner ear contain the above chemically and biologically active substances and that their localization is closely connected with the ultrastructure of the cell. Further investigations established that definite shifts in the localization and content of nucleic acids, total protein, functional groups of protein molecules, oxidizing enzymes, alkaline and acid phosphomonoesterase, and acetylcholinesterase occur in the definitive receptor structures of the inner ear of vertebrates when the auditory and equilibrium organs are adequately stimulated. A comparison of the data obtained in these investigations with those obtained in the investigations of the structural developments which take place in the inner ear of vertebrates in the embryonic and postnatal stages of growth make it possible to arrive at the conclusion that the biologically active substances which are responsible for the determination of the structure and the differentiation of the receptor elements also take part in the metabolic and specific functions of these elements. In other words, the author writes, receptor cell differentiation, its definitive structure, and its functions are determined by the same group of substances. This provides a basis for the concept that the same group of substances takes part in the differentiation, structural organization, metabolism, and specific functions of the receptor cells in the membranous labyrinth of vertebrates.

Orig. art. has: 6 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 23Feb65 / ORIG REF: 013 / OTH REF: 012

Card 2/2 C C

TITOVA, L.K.

Histochemical study of the development of the organ of Corti in mammals. Arkh. anat. gist. i embr. 48 no.4:32-40 Ap '65.

1. Laboratoriya evolyutsionnoy morfologii (zav. - prof. Ya.A. Vinnikov) Instituta evolyutsionnoy fiziologii i biokhimii imeni Sechenova AN SSSR, Leningrad. (MIRA 18:6)

TITOVÁ, L.Y.

Histochemical and electron microscopic studies of the development of receptor structures in the membranous labyrinth of the inner ear in vertebrates. Zhur. svob. biolog. i fizich. nauch. 4:321-327. 1965.
(MIRA, H.P.)

1. Laboratory experiments on development and structure of sensory physiological and tickling mechanisms of the labyrinth are being completed.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755910011-1

BEREZIN, B.V.; TITOVA, L.L.

Sorting of coal by coarseness in a horizontal air stream.
Koks. i khim. no.12:6-8 '63.
(MIRA 17:1)
1. Ural'skiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755910011-1"

USSR / General Biology. Genetics. Plant Genetics.

B-3

Abs Jour : Ref Zhur - Biol., No 14, 1953, No 61937

Author : Titova, L. N.

Inst

Title : "Perennial" Vegetative Reproduction as a Method of Preventing Fruitlessness in Intervaried Hybrids.

Orig Pub : Michurinsk. sb. Krasnodar, "Sov. Kuban'", 1957, 169-180

Abstract : The method of causing young shoots of adult Hibiscus cannabinus and their fruitless intervaried hybrids to take roots, is described here. Such grafts which have taken roots spend the winter in hothouses. The following year they are put into the ground and produce fruitbearing plants from which shoots may again be taken and made to take roots. It is also possible to graft seedlings upon rootstocks of related varieties, and then again to graft individual shoots of scions

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USSR / General Biology. Genetics. Plant Genetics.
Abs Jour : Rer Zhur - Biol., No 14, 1958, No 61937

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upon young rootstocks as the grafted plants become old. Such vegetative procedures of reproduction permit to transform hybrid seedlings of one year standing into plants which live in the form of changing rooted grafts and scions for a number of years. By using this method it was possible to obtain 4 already developed seeds from the almost sterile Hibiscus sp. 451 x Hibiscus cannabinus through F₁ plants, and 2 seeds through F₂ plants. The obtained data on the weakening of sterility in hybrids are discussed in the light of hybrid changeability as it is influenced by rootstocks and prolonged cultivation in unaccustomed conditions (particularly in hothouses during the winter). -- A. I. Kuptsov.

Card 2/2

TITOVA, I.P.

New centipede *Typhlops numinabedicus* Titova sp. n. (Meristococephali-
dae, Chilopoda) from southern Tajikistan. Zool. zhur. 44 no. 6:871-
876 '65.

(MIRA 18:10)

Le laboratoriya rochvennoy zoologii Instituta morfologii zhivotnykh
AN SSSR, Moskva.

USSR/Virology. Virus of Man and Animals
Abs Jour : Ref Zhur-Biol., No 13, 1958, 57422 E
Author : Titova L. P.
Inst : Not Given
Title : Encephalitis Virus in Erysipelas
Orig Pub : Pediatriya, 1957, No 8, 44-47
Abstract : No abstract

Card 1/1

TITOVA, L.P.

Virus encephalitis in rubella. Pediatrilia no.8:44-47 Ag '57.
(MIRA 10:12)
1. Iz kafedry pediatrii (zav. - prof. G.A.Nikolayev [deceased],
konsul'tant - deystvitel'nyy chlen AMN SSSR prof. S.N.Davidenkov)
Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey
imeni S.M.Kirova.
(ENCEPHALITIS) (RUBELLA)

TITOVA, L.P.

EXCERPTA MEDICA Sec 7 Vol. 12/8 Pediatrics Aug 58

2218. VIRAL ENCEPHALITIS IN RUBELLA (Russian text) - Titova L. P. -
PEDIATRIYA 1957, 8 (44-47)

Five cases were observed in children aged 4-11 yr., 3 of whom died. The symptoms of encephalitis began 2-4 days after the rash appeared.

Najman - Zagreb (L, 7, 8)

MIKHEYEVA, V.I., TITOV, L.V.

System pyridine - sodium borohydride. Zhur. neorg. khim. 9
no.3:682-687 Mr '64. (MIRA 17:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.
Kurnakova AN SSSR.

TITKOVA, M.F.

Organizing practical work on cattle breeding farms for students in
the 9th grade of rural schools. Politekh. obuch. no.1:56-59 Ja '57.

1. Is cypyta Karavayevskoy sredney shkoly Kostromskoy oblasti.
(Agriculture--Study and teaching) (Cattle breeding)

TITOVA, M. I. Cand. Biolog. Sci.

Dissertation: "Norms for the Supplemental Nourishment of Adult Sables."
Moscow Fur and Pelt Inst, 27 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

TITOVA, M. I.

"Norms for the Supplemental Nourishment of Adult Sables," Sub 27 May 47, Moscow
Fur and Pelt Inst.

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO: Sum.No.457, 18 Apr 55

TITVA, M. I.

TITVA, M. I. "Green fodder for rabbits," Katalinovodstvo i zverovedstvo, 1946,
No. 3, p. 59-60.

SO: U-5240, 17, Dec. 53, (Izdatel'stvo Zhurnal Statist, No. 25, 1949).

SHCHERBA, L. I.

Sables - Feeding and Feeding Stuffs

"Nutrition in rations with varied meat content for young sables." Kar. i zver. 5 no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

ATROVA, ...I.

8700

ATROVA, ...I. Razvedennyye Krolikev. ... Zayotichiat, 1990, v. 1 c. 3 ill. 0 m.
125,000 RUB. 1 R. 15 K--(50-5007) P/47.92

SO: Letopis' Zhurnal' mykh Statey, Vol. 7, 1999

TITOVA, Mariya Ivanovna; BALAKIN, V.M., red.; LOGINOV, Ye.I., tekhn.
red.

[Rabbit breeder's calendar] Kalendar' krolikovoda. Moskva, Izd-vo
M-va sel'.khoz. RSFSR, 1959. 40 p. (MIRA 14:9)
(Rabbit breeding)

USSR / Farm Animals. Wild Animals.

Q-4

Abs Jour : Ref Zhur- Biol., No 10, 1958, No 45268

Author : Perel'dik, N. Sh.; Titova, M. I.; Pobedin, V. I.
Inst : Not given

Title : The Utilization of the Soybean Oil Meal as a Food for Silver-
Black Foxes.

Orig Pub : Krakulevodstvo i zverovodstvo, 1957, No. 2, 22-26

Abstract : The possibility of substituting 40% of meat by soybean oil
meal in the rations fed to silver-black foxes during the
summer-fall period was established. In winter and during
the two-month period preceding the oestrus, as well as during
pregnancy, 20% of meat can be substituted. In the case of the
growing foxes, the substitution may amount to 67%. Accord-
ing to the author's data, when the silver-black foxes are
fed an increased amount of soybean oil meal, a higher level
of nutrition must be maintained than when the foxes are fed
animal feeds, and the rations should be enriched by all the
required vitamins.

Card 1/1

ABUKOVA, Ye.N.; CAREYEVA, M.S.; TITOVA, M.N.; DREMOVA, V.P. Prinimali
uchastiye: NIKIFOROVA, Ye.N.; REDZHEPOV, N.N.; KLENOVA, M.A.;
KAZAK, A.F.; FURMANOVA, N.M.; VISHNEVSKAYA, L.A.; SARKISOVA, E.N.

Measures for the control of acute intestinal diseases in Ashkhabad.
Zdrav.Turk. 6 no.4:3-8 Jl-Ag '62. (MIRA 15:8)
(ASHKHABAD--INTESTINES--DISEASES)

<p>25(5)</p> <p>PHASE I BOOK EXPLOITATION 307/2293</p> <p>Leningrad. Politetchnicheskij Institut Rashinotekhnopolye. ekonomika, organizatsiya i planirovaniye prodvodstvennoj (Machinery Manufacturing) i ekonomiki, Organizatsiya i planirovaniye (Planning of Economic Sciences, Professor; (Series 1ta; 2nd. Mr 200) Arata slip inserted. copies printed.</p> <p>2,800.</p>	<p>Sponsoring Agency: MSSR, Ministerstvo vystavochno-izdatel'stva</p> <p>Resp. M.: V.S. Saitov, Doctor of Technical Sciences, Professor; M.I. Ye. M. Karlik, Candidate of Economic Sciences, Docent; and S.A. Solntsev, Candidate of Technical Sciences, Docent; Tech. Ed.: R.O. Pol'skaya.</p> <p>PURPOSE: This collection of articles is intended for engineering and technical personnel of machine-manufacturing establishments.</p> <p>SCOPE: This collection covers the theoretical aspects of the economics, organization, and planning of production and the actual operation of machine-manufacturing establishments. The first five articles deal with problems of establishing the production lines for lot production of classifying a of 100 parts, and duration, variations of the flow of new technology, problems of quality control, etc. question of specialization and cooperation. References are given to the articles.</p> <p>PAPERBACK. 1. Economic Analysis in the Selection and Use of Assembly and Welding Equipment 2. Titors, N.V. Organizing Quality Control of Parts Manufactured on Automatic Lathes</p> <p>Karlik, N., and G.V. Malenkovskiy. Specialization and Coop- eration in the Ironcastings Industry in the Leningrad Economic Region.</p> <p>96</p> <p>74</p>
<p>AVAILABLE: Library of Congress</p> <p>Card 1/4</p> <p>JG/ea 10-16-59</p>	

TITOVA, M.V., inzh.

Determining norms for operating automatic lathes. [Trudy] Izh.mekh.
inst. no.2:113-119 '59. (MIRA 13:10)
(Factory management)

KUZNETSOV, V.I.; TITOVA, M.V.

Scale of the stratigraphy of upper Cretaceous sediments in the Tuar-Kyr region. Trudy VSEGEI 46:219-228 '61. (MIRA 14:11)
(Tuar-Kyr region--Paleontology, Stratigraphic)

TITOVA, N. V.

TITOVA, N. V. -- "The Effect of the Maintenance of Single-shaft Automatic Lathes on the Efficiency of Labor." Min Higher Education USSR, Leningrad Polytechnical Institute imeni M. I. Kalinin, Leningrad, 1956. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No 43, October 1956, Moscow

KORBOV, M.; TITOVA, N., inzh.

"Tables for computing wages for workers in enterprises of machinery manufacturing and metalworking industries" by V. M. Vinnichenko, D. I. Pavlov. Reviewed by M. Korbov, N. Titova. Sots. trud '7 no.8:156-157 Ag '62. (MIRA 15:10)

1. Nacl.-l'nik otdela truda i zarabotnoy platy zavoda im. Ukhtomskogo (for Korbov). 2. Otdel truda i zarabotnoy platy Yaroslavskogo parovozoremontnogo zavoda (for Titova).

(Wages--Machinery industry) (Wages--Metalworkers)

KONONOVA, M.M.; TITOVA, N.A.

Using paper electrophoresis for the fractionation of humus substances
of soil and studying their complex iron compounds. Pochvovedenie
no.11:81-88 N '61. (MIRA 14:12)
(Paper electrophoresis) (Soils--Iron content) (Humus)

KOBANOVA, N.M.; VASIL'YEVICH, T.V.; TITOVA, N.A.

Decomposition of silicates by soil organic substances.
Pochvovedenie no.10:i-12 - 6-164.

1. Pochvennyj institut imeni Dokuchaeva, Moscow, Russia
(ИИА им. Докучаева)

BOGDANOVA, V.T., inzh.; TITOVA, N.A., inzh.; TAGANOV, K.I., kand.
fiz.-mat.nauk; TYUMENEVA, S.T., inzh., red.; PROKOF'YEV,
V.K., prof., doktor fiz.-mat.nauk, laureat Stalinskoy premii,
otv.red.; FREGER, D.P., tekhn.red.

[Spectral analysis of steels with an alternating-current arc]
Spektral'nyi analiz stalei s dugoi peremennogo toka. Leningrad,
1952. 3 p. (Informatsionno-tehnicheskii listok, no.101 (442))

(MIRA 14:6)

1. Leningradskiy Dom nauchno-tehnicheskoy propagandy.
(Steel—Spectra)

JENKS, William Furness; APEL'TSIN, F.R. [translator]; TITOVA, N.A.
[translator]. Prinimala uchastiye TEPLYAKOVA, I.P. [translator].
SHEYMMANN, Yu.M., red.; KARASEV, A.D., red.; GRIBOVA, M.P.,
tekhn.red.

[Handbook of South American geology] Ocherki po geologii IUzhnoi
Ameriki; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959.
341 p. Translated from the English. (MIRA 13:11)

1. University of Cincinnati, Cincinnati, Ohio (for Jenks).
(Latin America--Geology)

LUCHITSKAYA, A.I. [translator]; TITOVA, N.A. [translator]; YAKOVENKO, M.Ye., red.; KHAR'KOVSKAYA, L.M., tekhn.red.

[Stratigraphic handbook: Vietnam, Laos, Cambodia, Thailand, Malaya] Stratigraficheskii spravochnik: V'etnam, Laos, Kambodzha, Tailand, Malaia. Moskva, Izd-vo inostr.lit-ry, 1960. 256 p. Translated from the English and the French.

(MIRA 13:10)

1. International Geological Congress. 20th, Mexico.
(Asia, Southeastern--Geology, Stratigraphic)

TITOVA, N.A. [translator]; SHNEYERSON, S.B. [translator]; YAKOVENKO,
A.Ye., red.; SMIRNOVA, N.I., tekhn.red.

[Pegmatites of Central Africa; a collection of articles]
Pegmatity Tsentral'noi Afriki; sbornik statei. Predisl. A.I.
Ginzburga. Moskva, Izd-vo inostr.lit-ry, 1958. 285 p.
[Translated from the French] (MIRA 12:5)
(Africa, Central--Pegmatites)

TITOVA, N.A.

Iron-humus complexes of some soils. Pochvovedenie no.12:38-43
D '62. (MIRA 16:2)

1. Pochvennyy institut imeni V.V.Dokuchayeva.
(Soils--Iron content) (Humus)

YEGOYAN, V.L. [translator]; ZHABREV, I.P. [translator]; KOLCHANOV, V.P.
[translator]; MOISEYEVA, V.M. [translator]; PETRENKO, V.S.
[translator]; PETRENKO, I.M. [translator]; SHUKOV, M.D.
[translator]; TITOVA, N.A. [translator]; KHAIN, V.Ye., red.;
ROMANOVICH, G.P., red.; REZOUKHOVA, A.G., tekhn.red.

[Present-day studies of the tectonics of foreign countries]
Voprosy sovremennoi zarubezhnoi tektoniki; sbornik statei.
Moskva, Izd-vo inostr.lit-ry, 1960. 498 p. Translated articles.
(MIRA 13:12)

(Geology, Structural)

KOTLYAR, V.N.; TITOWA, N.A.; KRISTAL'NYY, B.V.; SHEVCHENKO, G.A.,
tekhn.red.

[Geology, and uranium and thorium resources in capitalist
countries; collected studies] Voprosy geologii i syr'evoi
bazy urana i torija kapitalisticheskikh stran; sbornik statei.
Moskva, Vses.in-t nauchn.i tekhn.informatsii, 1959. 143 p.
(MIRA 13:2)

(Uranium)

(Thorium)

AVAKOVA, L.S.; KUSTOVA, S.D.; TITTOVA, N.B.

Composition of the hydrogen-containing fraction of low menthol
peppermint oil. Trudy VNIISNDV no.6:125-127 '63. (MIR 17:4)

AVAKOVA, L.S.; KUSTOVA, S.D.; RUDOL'FI, T.A.; SEVERTSEV, V.A.; TITOVA, N.B.;
CHERKAYEV, V.G.; SHCHEDRINA, M.M.

Increasing the menthol content of low menthol peppermint oil.
Trudy VNIISNDV no.6:164-166 '63. (MIRA 17:4)

TIROVA, N. F.

17616

USSR/Biology - Plant Breeding
Sugar Beets

Sep/Oct 50

"Changes in the Characteristics of Sugar Beets as a Result of Grafting," N. A. Negovskiy,
N. F. Titova, Candidates Agri Sci, All-Union Sci Res Inst of Sugar Beets, Kiev

"Agrobiologiya" No 5, pp 104-107

Checks effects of grafting various combinations of sugar beet varieties on wt of
root, its sugar content, and deg of foliation. One table, 3 photographs.

PA 176T6

GAYDAMOVICH, S.Ya.; DUAN SUAN-MYOU; TITOVA, N.G.

Detection of hemagglutinins of the Japanese and tick-borne encephalitis viruses in tissue culture. Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:30-31 '61. (MIRA 16:11)

1. Institut virusologii im. D.I.Ivanskogo (direktor - prof. P.N. Kosyakov) AMN SSSR, Moskva.

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GAIDAMOVICH, S. Ya.; TITOVA, N. G.

Accumulation dynamics of infectious virus particles and haemagglutinating and complement-fixing antigens of tick-borne encephalitis virus in the course of infection of tissue cultures. Acta virol. (Praha) [Eng]6 no.2:151-158 Mr '62.

I. D. I. Ivanovsky Institute of Virology, U.S.S.R. Academy of Medical Sciences and Institute of Experimental Biology and Medicine, U.S.S.R. Academy of Sciences, Moscow.

(ENCEPHALITIS EPIDEMIC virol)
(COMPLEMENT)
(HEMAGGLUTINATION)

MINAKOVA, L.V.; TITOVA, N.G.

Use of aldolase activity determination in detecting obliterated
anicteric forms of Botkin's disease. Zhur. mikrobiol. epid. i
immun. 31 no. 107-108 My '60. (MIRA 13:10)

1. Iz Kirovskogo oblastnoy sanitarno-epidemiologicheskoy stantsii.
(HEPATITIS, INFECTIOUS) (ALDOLASE)

GAIDAMOVICH, S. Ya.; TITOVA, N. G.

Interference between tick-borne and Japanese B encephalitis viruses
in sheep embryo kidney epithelial tissue cultures. Acta virol. Engl.
Ed. Praha 5 no.6:386 N '61.

1. Ivanovsky Institute of Virology, U.S.S.R. Academy of Medical Sciences,
Moscow.

(ENCEPHALITIS JAPANESE B virol)
(ENCEPHALITIS EPIDEMIC virol)

GAIDAMOVICI, S. I.; TITOVA, N. G.

Time of collecting tick-borne encephalitis virus cultured in vitro
in chick fibroblasts. Stud. cercet. inframicrobiol. 13 no.1:11-18
'62.

(VIRUSES culture)
(ENCEPHALITIS, EPIDEMIC virology)

GAYDAMOVICH, S.Ya.; TITOVA, N.G.; DOROFYEVA, Yu.K.; MEDVEDEVA, G.I.

Isolation and identification of the virus of tick-borne encephalitis in tissue culture. Vop. virus. 9 no.3:344-348 My-Je '64.
(MIRA 18:1)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.

GAYDAMOVICH, S.Ya.; DUAN SUAN-MYOU; TITOVA, N.G.

Hemagglutinins of Japanese and tick-borne encephalitis viruses
in sheep embryo kidney culture. Vop. virus 7 no.1:43-49 Ja-F
'62. (MIRA 15:3)

1. Laboratoriya diagnostiki i indikatsii Instituta virusologii
imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(ENCEPHALITIS)
(TICKS AS CARRIERS OF DISEASE)
(HEMAGGLUTININ)

TITOVA, N.G.

Multiplication of the virus of tick-borne encephalitis in a culture of chicken embryo fibroblasts and its release from the cells. Vop. virus 7 no.1:50-55 Ja-F '62. (MIRA 15:3)

1. Laboratoriya indikatsii Instituta virusologii imeni D.I. Ivanovskogo AMN SSSR i Institut eksperimental'noy biologii i meditsiny AN SSSR, Moskva.

(ENCEPHALITIS)
(TICKS AS CARRIERS OF DISEASE)

L'VOVA, A.I.; TITOVA, N.G.

Use of different virological methods of determining cellular and
free antigens of tick-borne encephalitis in a tissue culture
during the development of the infection. Vop.virus. 7 no.6:
665-670 N-D '62. (MIRA 16:4)

1. Institut virusologii imeni D.I.Ivanoskogo AMN SSSR, Moskva.
(ENCEPHALITIS) (ANTIGENS AND ANTIBODIES)

SLAVIN, S.V., doktor ekon. nauk; GRANIK, G.I., kand. ekon. nauk; LOGINOV, V.P.; MIKHAYLOV, S.V.; SHAPALIN, B.F., kand. geogr. nauk; AVAKYAN, M.I., nauchnyy sotr.; ZAKHAROV, G.A., nauchnyy sotr.; KAMENITSER, L.S., nauchnyy sotr.; TITOVA, N.I., nauchnyy sotr.; TYURDENEV, A.P., nauchnyy sotr.; CHUGUNOV, B.I., starshiy nauchnyy sotr.; KOGAN, I.L.; MESHKOVSKAYA, L.V., starshiy inzh.; LUKIN, I.I.; FAYERSHTEYN, R.I.; Prinimali uchastiye: Agranat, G.A., kand. geogr. nauk, red.; PUZANOVA, V.F., kand. geogr. nauk, red.; KUPRIYANOV, A.B., nauchnyy sotr., red.; SOBOLEV, Yu.A., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.

[Problems in developing the productive forces of Magadan Province]
Problemy razvitiia proizvoditel'nykh sil Magadanskoi oblasti. Moskva, Izd-vo Akad. nauk SSSR, 1961. 301 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil.
2. Glavnyye inzhenera proyekta "Dal'stroyproyekt" (for Kogan, Fayershteyn).
3. Institut ekonomiki Akademii nauk SSSR (for Chugunov).
4. Energoupravleniye Magadanskogo Soveta narodnogo khozyaystva (for Meshkovskaya).
5. Nachal'nik Oblastnogo otdela po delam stroitel'stva i arkhitektury Magadanskoy oblasti (for Lukin).

(Magadan Province—Industries) (Magadan Province—Economic policy)

TITOVA, N.M.; KILLEROG, N.M.; KADASHEVICH, O.A., tekhn. red.

[Toward stellar worlds] K zvezdnym miram. Kiev, Izd-vo Akad.
nauk USSR, 1961. 99 p. (MIRA 15:2)
(Astronautics)

KRYZHANOVSKIY, Oleg Mikhaylovich; VRUBLEVSKIY, Vladislav Iosifovich;
ANTONENKO, Vladimir Timofeyevich; TITOVA, N.M., red.

[Automation of cupola furnaces] Avtomatizatsiia vagranok.
Kiev, Izd-vo AN USSR, 1963. 103 p. (MIRA 17:5)

NIKITIN, Fedor Ivanovich; GOREK, Konstantin Petrovich;
LYAUPIS, Borisov Vladimirovich, (1904-), M.M., red.

[An electronic machine makes steel] Elektronnaja masina
varit stal'. Kiev, Naukova dumka, 1964. 65 p.

(USSR, P79)

TISHCHENKO, Vadim Grigor'yevich; TITOVA, N.N., red.

[Pyrometry of liquid metals; methods and equipment for
the measurement and automatic control of liquid metal
temperatures] Pirometria zhidkikh metallov; metody i
pribory dlja izmerenija i avtomaticheskogo regulirova-
nia temperatury zhidkikh metallov. Spravochnik. Kiev,
Naukova dumka, 1964. 191 p. (MIRA 17:12)

ADAMENKO, Aleksey Ivanovich; POSTNIKOV, I.M., doktor tekhn. nauk,
otv. red.; TITOVA, N.M., red.

[Motors for single-phase three-wire networks] Dvigateli dlia
odnofaznykh trekhprovodnykh setei. Kiev, Izd-vo AN USSR,
1963. 124 p.
(MIRA 17:4)

BARABOV, Vilen Abramovich; KIRICHINSKIY, Boris Romanovich; TITOVA,
N.M., red.; DAKHNO, Yu.B., tekhn. red.

[Nuclear radiation in biology] IAdernye izlucheniia v bio-
logii. Kiev, Izd-vo AN USSR, 1963. 131 p. (MIRA 17:3)

CHERNYY, Viktor Gavrilovich; TITOVA, N.M., red.; BEREZOVSKAYA,
D.N., tekhn. red.

[Rays are studying metals] Luchi izuchaiut metall. Kiev,
Izd-vo AN Ukr.SSR, 1963. 81 p. (MIRA 17:2)

DANILENKO, Vladimir Mikhaylovich; TITOVA, N.M., red.; DAKHNO, Yu.B.,
tekhn. red.

[What is a solid?] Chto takoe tverdoe telo? Kiev, Izd-vo
AN USSR, 1963. 76 p.
(MIRA 17:1)

YEREMEYEV, Igor' Semenovich; PANASYUK, Leonid Stepanovich; TITOVA,
N.M., red.; DAKHNO, Yu.B., tekhn. red.

[Automatic control devices using magnetic elements] Ustroistva
avtomatiki na magnitnykh elementakh. Kiev, Izd-vo
AN Ukr.SSR, 1963. 105 p. (MIRA 17:1)

POL'SKIY, Naftul Iosifovich; TITOVA, N.M., red.; KADASHEVICH, O.A.,
tekhn. red.

[On the various geometries] O razlichnykh geometriakh. Izd.2.,
dop. i perer. Kiev, Izd-vo Akad. nauk USSR, 1962. 99 p.
(MIRA 15:9)

(Geometry)

TITCOVA, N.M.

PHASE I BOOK EXPLOITATION SOV/5482

Shecherban', Aleksandr Nazar'yevich, Oleg Aleksandrovich Kremnev,
and Nina Mikhaylovna Titova

Svoystva vlaghnogo vozdukha pri davleniyakh 500-1000 mm rt.
st.; tablitsy i diagrammy (Properties of Moist Air With Pres-
sure of 500-1000 mm Hg; Tables and Diagrams) Moscow,
Gosgortekhizdat, 1960. 131 p. Errata slip inserted. 2,000
copies printed.

Ed. of Publishing House: I. V. Khodneva; Tech. Ed.: Z. A. Boldyreva.

PURPOSE : This manual is intended for the designers of all types
of ventilation and air-conditioning equipment used in various
branches of the national economy, and may be helpful to tech-
nical personnel concerned with fire prevention in mines.

COVERAGE: The manual contains detailed tables and diagrams of
moist air within wide limits of variation of pressure (500 to
1000 millimeters Hg), temperature (-30° to +60°C), and relative
humidity (0 to 100%). On the basis of these tables it is
Card 1/4.

Properties of Moist Air (Cont.)

SOV/5482

possible to determine moist air parameters and the processes of their variation. These data are necessary for the rational designing of ventilation and air-conditioning equipment. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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2. Thermodynamic relationships of the basic moist air parameters and their approximation for mine conditions	5
3. Compilation and use of moist air tables	6
4. Plotting and use of moist air I - d diagrams	9
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Card 2/4

LUTSKIY, Viktor Aleksandrovich; POGREBINSKIY , S.V., otv. red.;
TITOVA, N.M., red.; TURBANOVA, N.A., tekhn. red.

[Calculation of the reliability and efficiency of radio-electronic apparatus] Raschet nadezhnosti i effektivnosti radio-elektronnoi apparatury; spravochnoe rukovodstvo.
Kiev, Izd-vo Akad. nauk USSR, 1963. 146 p. (MIRA 16:6)
(Radio industry--Quality control)
(Electronic apparatus and appliances)

BABINETS, Andrey Yevtikhievich; GORDIYENKO, Yevgeniya Yemel'yanovna;
DENISOVA, Vera Romanovna; TITOVA, N.M., red.; KOMOVSKAYA,
A.R., tekhn. red.

[Therapeutic mineral waters and health resorts of the Ukraine]
Lechebnye mineral'nye vody i kurorty Ukrayiny. Kiev, Izd-vo
Akad. nauk USSR, 1963. 164 p. (MIRA 16:7)
(UKRAINE--HEALTH RESORTS, WATERING PLACES, ETC.)

SHCHERBAN', Aleksandr Nazar'yevich; KREMNEV, Oleg Aleksandrovich;
TITOVA, Nina Mikhaylovna; KHODNEVA, I.V., red.izd-va;
BOLDYREVA, Z.A., tekhn.red.

[Properties of humid air at pressures of 500-1000 mm.hg.]
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